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10/628,885	07/28/2003	Robert P. Enns	1014-0721US01 / JNP-0323	3864
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EXAMINER				
DAYE, CHELSEA L				
ART UNIT		PAPER NUMBER		
2161				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/628,885

Applicant(s)

ENNS ET AL.

Examiner

CHELCIE DAYE

Art Unit

2161

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-15, 19-24, 26-35 and 56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-15, 19-24, 26-35 and 56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is issued in response to applicants after final filed April 20, 2009.
2. Claims 1-4, 6-24 and 26-56 are presented. No claim added and claims 5, 16-18, 25, and 36-55 are cancelled.
3. Claims 1-4, 6-15, 19-24, 26-35, and 56 are pending.
4. Applicant's arguments, filed 04/20/09, with respect to the improper finality of the rejection of the claims within the previous office action have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1,6-11,15,22,26-31,35, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valois (US Patent Application No. 20040260818) filed June 23, 2003, in view of Delany (US Patent Application No. 20020156879) filed November 30, 2001, further in view of Lucovsky (US Patent No. 7,284,271) filed October 22, 2001.**

Regarding Claims 1, 22, and 56, Valois discloses a method for controlling access to a resource of a device, the method comprising:

storing, within a device, authorization data that defines: (i) an access control attribute ([0058], lines 4-10, Valois)¹, and (ii) an associated regular expression specifying a textual pattern ([0057], lines 4-9, Valois). However, Valois is not as detailed with respect to at least one class of clients that access the device and coarse-grain access control rights for members of the class to configuration data for a resource provided by the device. On the other hand, Delany discloses at least one class of clients that access the device ([0112], Delany) and coarse-grain access control rights for members of the class to configuration data for a resource provided by the device ([0118], Delany). Valois and Delany are analogous art because they are from the same field of endeavor of relating to a system that provides authorization compliance validation with a security policy. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Delany's teachings into the Valois system. A skilled artisan would have been motivated to combine in order to achieve the level of detail at which the data would have been considered. As a result, coarse-grain access provides higher performance through more optimized protocols and the data tends to work on contiguous regions at a time. However, the combination of Valois in view of Delany, are not as detailed with fine-grain access control rights for the members of the class to only a portion of the

configuration data for the resource provided by the device. On the other hand, Lucovsky discloses fine-grain access control rights for the members of the class to only a portion of the configuration data for the resource provided by the device (col.2, lines 41-55, Lucovsky). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Lucovsky's teachings into the Valois and Delany system. A skilled artisan would have been motivated to combine in order to provide a system for granting appropriate access privileges based on authentication credentials. Therefore, the combination of Valois in view of Delany, and further in view of Lucovsky, disclose receiving, with the device, a command from a client, wherein the command requests access to configuration data for the resource of the device ([0159] and [0165], Delany); identifying the class of which the client is a member ([0166], Delany); retrieving, from the authorization data, both the access control attribute and the regular expression for the identified class of which the client is a member ([0088], Valois); evaluating the command using the retrieved regular expression to determine whether the command matches the textual pattern specified by the retrieved regular expression ([0118], lines 19-26, Delany); and controlling access to the portion of the configuration data requested by the client based on both: (i) the coarse-grain access control rights to the configuration data of the resource specified by the access control attribute for the identified class of which the client is a member,

¹ Examiner Notes: Authorization data corresponds to "references" and the definition is an attribute that is part of the Access Control List (ACL).

and (ii) the evaluation of the regular expression for that class ([0159], lines 1-10, Delany).

Regarding Claims 6 and 26, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method wherein the coarse-grain access control attribute comprises a set of permission bits, and each of the permission bits is associated with a respective group of the resources ([0161], lines 3-5, Delany).

Regarding Claims 7 and 27, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method further comprising receiving the command from the client via a command line interface ([0199], lines 2-11, Delany)².

Regarding Claims 8 and 28, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method wherein evaluating the command comprises evaluating the command in real-time ([0383], lines 9-14, Delany) while the client inputs the command via the command line interface ([0199], lines 2-11, Delany).

² Examiner Notes: Receiving the command from a client corresponds to "a user can request..." and the interface corresponds to "GUI".

Regarding Claims 9 and 29, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method wherein the configuration data is arranged in the form of a multi-level configuration hierarchy having a plurality of objects (Fig.5, [0142], lines 1-2, Delany), and each of the objects represents a portion of the configuration data that relates to one or more resources of the device ([0142], lines 2-5, Delany).

Regarding Claims 10 and 30, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method wherein the objects have respective textual labels ([0143], lines 1-4, Delany) and the regular expression defines the textual pattern to match the textual labels ([0057], lines 4-9, Valois) of a set of one or more of the objects within the configuration hierarchy (Fig.5, Delany).

Regarding Claims 11 and 31, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method wherein evaluating the command comprises applying the regular expression to the command ([0099], lines 1-7, Valois) to determine whether the command specifies any of the objects within the set ([0142], lines 2-5, Delany).

Regarding Claims 15 and 35, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method wherein controlling access comprises controlling access to configuration data of a router ([0053], lines 6-10, Valois).

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valois (US Patent Application No. 20040260818) filed June 23, 2003, in view of Delany (US Patent Application No. 20020156879) filed November 30, 2001, further in view of Lucovsky (US Patent No. 7,284,271) filed October 22, 2001, and further in view of Mitra (US Patent No. 6,973,460) filed November 26, 2002.

Regarding Claim 4, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method for storing authorization data ([0058], lines 4-10, Valois). However, Valois, Delany, and Lucovsky do not explicitly disclose storing the authorization data as a class that conforms to a class syntax. On the other hand, Mitra discloses storing the authorization data as a class that conforms to a class syntax (column 8, lines 7-18, Mitra). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Mitra's teaching into the Valois, Delany, and Lucovsky system. A skilled artisan would have been motivated to combine the two references as suggested by Mitra (column 7, lines 48-52), in order for the classes to be annotated such that, at run-time, useful information about how the data is

organized for each of the various ways of storing the data (i.e. configuration) may be extracted from the annotations. As a result, this allows for various services to perform operations in accordance with the information.

8. Claims 12-14,19-21, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valois (US Patent Publication No. 2004/0260818) June 23, 2003, in view of Delany (US Patent Publication No. 2002/0156879) filed November 30, 2001, further in view of Lucovsky (US Patent No. 7,284,271) filed October 22, 2001, and further in view of Nelson (US Patent No. 6,243,713) filed August 24, 1998.

Regarding Claims 12 and 32, the combination of Valois in view of Delany, further in view of Lucovsky, disclose a method further comprising to automatically insert one or more meta-characters into the regular expression ([0451-0453], lines 1-7, Delany) based on the hierarchical arrangement of the configuration data (Fig.5, Delany). However, Valois in view of Delany, further in view of Lucovsky, does not explicitly disclose pre-processing the regular expression. On the other hand, Nelson discloses pre-processing the regular expression (column 10, lines 39-50, Nelson). It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Nelson's teachings into the Valois in view of Delany, further in view of Lucovsky, system. A skilled artisan would have been motivated to combine the two references as suggested by Nelson (column 9, lines 60-65), in order to convert component data into a list of distinctive objects

that represent the original data of the component, this is understood to perform data reduction. Pre-processing remove any non-essential information that does not substantially add to the quality of the system. As a result, pre-processing saves the system time and space for capacity.

Regarding Claims 13 and 33, the combination of Valois in view of Delany, further in view of Lucovsky, and further in view of Nelson, discloses a method further comprising:

pre-processing the regular expression (column 10, lines 39-50, Nelson) so that the command is evaluated with the regular expression in real-time ([0383], lines 9-14, Delany) as the client enters the command ([0199], lines 2-11, Delany).

Regarding Claims 14 and 34, the combination of Valois in view of Delany, further in view of Lucovsky, and further in view of Nelson, discloses a method wherein evaluating the command comprises evaluating the command with the pre-processed regular expression each time the client enters a token indicating a textual break within the command (column 17, lines 35-40, Nelson).

Regarding Claim 19, the combination of Valois in view of Delany, further in view of Lucovsky, and further in view of Nelson, discloses a method comprising:

receiving input defining at least one class of clients that access the device ([0112], Delany), wherein the input defines for each class of clients an access control attribute ([0058], lines 4-10, Valois) and an associated regular expression that specifies a textual pattern ([0057], lines 4-9, Valois);

pre-processing the regular expression (column 10, lines 39-50, Nelson) for each class of clients to automatically insert one or more meta-characters into the regular expression ([0451-0453], lines 1-7, Delany);

receiving an access request from a client ([0113], Delany);

identifying the class of which the client is a member ([0166], Delany);

retrieving the access control attribute and the regular expression for the identified class of which the client is a member ([0088], Valois);

evaluating a command in real-time using the regular expression ([0383], lines 9-14, Delany) for the identified class of which the client is a member as the client enters the command via a command line interface ([0199], lines 2-11, Delany); and

controlling access to configuration data of a device based on the evaluation ([0066], lines 1-9, Valois).

Regarding Claim 20, the combination of Valois in view of Delany, further in view of Lucovsky, and further in view of Nelson, discloses a method further comprising storing the configuration data in the form of a multi-level configuration

hierarchy having a plurality of objects (Fig.5, [0142], lines 1-2, Delany), wherein pre-processing the regular expression comprises automatically inserting one or more meta-characters into the regular expression ([0451-0453], lines 1-7, Delany) based on the hierarchical arrangement of the configuration data (Fig.5, Delany).

Regarding Claim 21, the combination of Valois in view of Delany, further in view of Lucovsky, and further in view of Nelson, discloses a method wherein the regular expression defines a textual pattern that identifies one or more of the objects within the configuration hierarchy, and evaluating the command comprises:

applying the regular expression in real-time ([0383], lines 9-14, Delany) to determine whether a portion of the command that has been entered by the client matches the textual pattern ([0064], lines 1-5, Valois); and

selectively allowing the client to complete the command based on the determination ([0199], lines 2-11, Delany).

Allowable Subject Matter

11. Claims 2, 3, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: allowing access to the configuration data when the access control attribute denies access to the resource and the textual pattern of the regular expression matches the command; and denying access to the configuration data when the access control attribute grants access to the resource and the textual pattern of the regular expression matches the command.

Response to Arguments

Applicant's arguments with respect to the newly amended claims have been considered but are moot in view of the new ground(s) of rejection.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHELCIE DAYE whose telephone number is (571) 272-3891. The examiner can normally be reached on M-F, 7:00 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chelcie Daye
Patent Examiner
Technology Center 2100
April 30, 2009

/Apu M Mofiz/
Supervisory Patent Examiner, Art Unit 2161